



Department of Energy
Idaho Operations Office
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February 2, 2004

Mr. Nicholas Ceto, INEEL Project Manager
Environmental Protection Agency, Region 10
712 Swift Blvd., Suite 5
Richland, WA 99352

Mr. Daryl F. Koch, Acting Remediation Manager
Waste Management and Remediation Division
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706-1255

**SUBJECT: Transmittal of OU 7-13/14, Remedial Investigation/Feasibility Study Work Plan
Draft Second Addendum Comment Resolution – (EM-ER-04-023)**

Dear Mr. Ceto and Mr. Koch:

The agencies held conference calls during the week of December 15, 2003, to resolve an informal dispute on the OU 7-13/14 Remedial Investigation/Feasibility Study (RI/FS) Work Plan Draft Second Addendum. A majority of the comments submitted by Idaho Department of Environmental Quality (IDEQ) had been resolved prior to the conference calls. Therefore, the enclosed table of Environmental Protection Agency comments was used during the calls to focus discussions on the remaining issues. DOE has added final resolution statements, to the table used during the calls, which summarize the decisions made. Some of the decisions have since been modified by the continuing discussions, between the agencies, to develop a mutually agreed on path forward for remediation of the Subsurface Disposal Area.

Review of conference call notes indicated that while agreement was reached on a broad outline for the "no action" exposure scenario and the addition of an intentional intruder to exposure scenarios, the agencies still have not agreed on the specific elements of each exposure scenario. Discussions, to date, indicate each agency has interpreted published RI/FS guidance differently. DOE would like to have agency input to, and agreement on an outline for each scenario included in the risk analysis. The INEEL contractor will then be directed to develop the scenarios. The new members on the CERCLA team may have approaches that were not considered during the December conference calls. If we can agree on the exposure scenarios now, the RI/BRA will more likely meet the needs of all parties. The final resolution statements for several comments request information from the agencies by 2/16/04. If scenarios can be framed in the next two weeks, a revised Work Plan Draft Second Addendum can be completed by 3/1/04 and sent to you.

There are three issues that were not identified by either IDEQ or EPA that DOE needs resolved. A careful review of the Draft Second Addendum found sections that are now obsolete because of recent events. The revision of the document should include removal or modification of these sections. For example, in Section 1.3, the last paragraph addressing early actions is now inaccurate. The team must decide whether to perform detailed analysis of in-situ vitrification (ISV). The former EPA Project Manager thought that it was necessary to provide a detailed analysis to maintain balance in the RI/FS. But, all parties have enough data to reject implementation of ISV at the RWMC in the near-term. The technology does not meet the site safety requirements and is not effective in mitigating risk for important waste forms. DOE has not included complete retrieval of all SDA waste forms in any preliminary analysis. The current Scope of Work excludes full retrieval because of the high-gamma, remote-handled waste forms. Since the team has changed, this assumption needs to be revalidated.

Sincerely,

A handwritten signature in cursive script that reads "Kathleen E. Hain".

Kathleen E. Hain, Lead
Environmental Restoration

Enclosure

cc: T. Livieratos, IDEQ
M. Clough, IDEQ
D. Faulk, EPA

Additional Idaho Department of Environmental Quality Comments on the Operable Unit 7-13/14 Draft Final Second Addendum to the Work Plan and U.S. Department of Energy Responses

Considerable work has been completed by all parties since DOE responded to Agency comments on the RI/FS Work Plan Addendum. Specifically, a meeting was held October 14-16 to address assumptions in the fate and transport modeling effort that have been a concern to the Agencies. During this meeting tentative agreement was reached in several areas to address DEQ's concerns. These agreements and actions items need to be formally agreed upon and incorporated into the work plan addendum during the informal dispute resolution process. DEQ concerns for the informal dispute resolution process are as follows:

1. **Facilitated Transport of Plutonium** -- Both colloidal and colloidal size fractions are important concepts to this aspect of transport. As discussed during our meeting on October 14-16, this aspect of fate and transport needs to be addressed in the Remedial Investigation. (See DEQ General Comment #2, Specific Comment #11).
DOE Response: DOE is developing recommendations for plutonium transport modeling, as discussed in the modeling workshop. The approach involves identifying potentially mobile waste forms, estimating an appropriate fraction that should be modeled as mobile, and simulating transport by assigning a low K_d to the mobile fraction.

2. **Mathematical Model** -- During the October 14-16 meeting, various aspects of the structure of the mathematical model that has been developed to evaluate risk and to assess remedial alternatives were discussed. Concerns were expressed regarding the thickness assigned spatially to the interbeds and the spatial distribution of hydraulic and transport variables such as porosity and permeability within the interbeds. Agreement must be reached on how these findings will be addressed in the Remedial Investigation Report.
DOE Response: DOE is validating interbed thickness values used in the model by reviewing well logs and geophysical logs. The use of spatially variable interbed porosity and permeability will be continued, with the objective of maintaining overall consistency with the OU 7-08 modeling. The assigned infiltration rate for the "high" infiltration regions will be revised to be consistent with the infiltration rates resulting from the inverse modeling using the moisture data from the SMR probes installed within waste.

3. **Bench-Scale Versus Field-Scale** -- The lack of appropriate field scale tests of the proposed components of the remedial action raises concern that an inadequate combination of the components could result. For instance, a laboratory test to determine the permeability of a small sample of grout is not representative of the overall permeability of the grout on a field scale with waste where shrinkage, fracturing, and other permeability enhancing phenomena can occur. The lack of application of the proposed components within the RWMC has not been demonstrated. A field scale application of all of the components, both cold and hot tests, within the RWMC has not occurred. (DEQ comment #2, #10)
DOE Response: DOE does not agree that all possible components must be demonstrated at the field scale to support remedial decisions. DOE reiterates that existing information is sufficient to proceed with a ROD. Time-consuming and expensive field-scale cold and hot tests, if necessary, should be limited to technologies that will be deployed as components of the selected remedy.

4. **Schedule** -- In July of 2002 DOE-ID proposed an accelerated schedule to issue the draft 7-13/14 RI/FS. DEQ has expressed concerns with this approach since the acceleration does not allow sufficient time for data to be gathered from the GEM project to be considered as part of the RI/FS in

accordance with the schedule logic agreed to in the Pit 9 Agreement to Resolve Dispute. Contrary to DOE response to comments GEM does provide data and information necessary to validate assumptions being made in the RI. Therefore, DEQ requests the DOE-ID revert to the original 7-13/14 RI/FS schedule agreed to by all parties in the Pit 9 Agreement to Resolve Disputes in order to collect adequate information for the GEM retrieval, Pu specific colloidal, modeling, and reassessment of interbed thickness for transport properties.

DOE Response: DOE will provide the RI/BRA and FS according to the enforceable schedule established in the OU 7-10 agreement to resolve disputes.